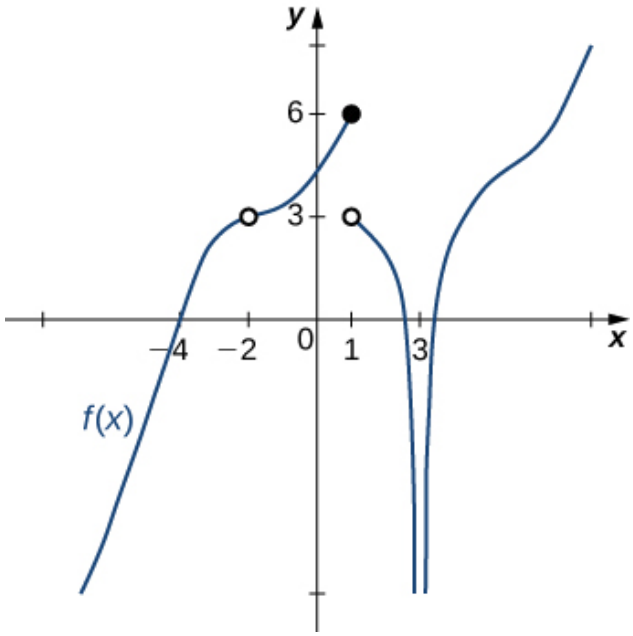
1. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x)$ does not exist.



A. 1

B. -2

C. 3

D. Multiple a make the statement true.

E. No a make the statement true.

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2. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to -1^+} \frac{8}{(x-1)^7} + 5$$

A. $-\infty$

B. ∞

C. $f(-1)$

D. The limit does not exist

E. None of the above

3. Evaluate the limit below, if possible.

$$\lim_{x \to 8} \frac{\sqrt{9x - 36} - 6}{2x - 16}$$

A. 0.083

B. 1.500

C. ∞

D. 0.042

E. None of the above

4. Based on the information below, which of the following statements is always true?

As x *approaches* 2, $f(x)$ *approaches* 0.774.

A. $f(x)$ is close to or exactly 0.774 when x is close to 2

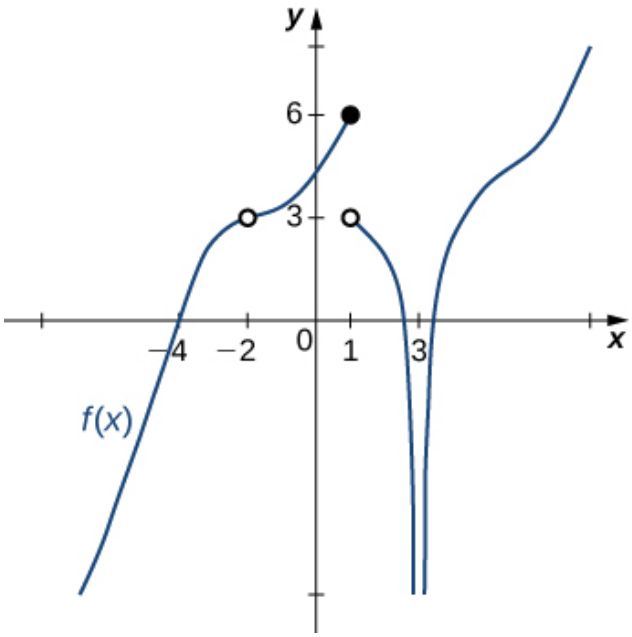
B. $f(x) = 2$ when x is close to 0.774

C. $f(x) = 0.774$ when x is close to 2

D. $f(x)$ is close to or exactly 2 when x is close to 0.774

E. None of the above are always true.

5. For the graph below, find the value(s) a that makes the statement true: $\lim_{x \to a} f(x) = 3$.



A. $-\infty$

B. -2

C. 1

D. Multiple a make the statement true.

E. No a make the statement true.

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6. Evaluate the limit below, if possible.

$$\lim_{x \to 7} \frac{\sqrt{6x-6}-6}{9x-63}$$

A. ∞

B. 0.083

C. 0.056

D. 0.272

E. None of the above

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7. Evaluate the one-sided limit of the function $f(x)$ below, if possible.

$$\lim_{x \to 3^+} \frac{-6}{(x+3)^3} + 3$$

A. ∞

B. $-\infty$

C. $f(3)$

D. The limit does not exist

E. None of the above

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8. To estimate the one-sided limit of the function below as x approaches 6 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{6}{x} - 1}{x - 6}$$

A. $\{6.0000, 5.9000, 5.9900, 5.9990\}$

B. $\{5.9000, 5.9900, 6.0100, 6.1000\}$

C. $\{6.1000, 6.0100, 6.0010, 6.0001\}$

D. $\{5.9000, 5.9900, 5.9990, 5.9999\}$

E. $\{6.0000, 6.1000, 6.0100, 6.0010\}$

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9. To estimate the one-sided limit of the function below as x approaches 7 from the left, which of the following sets of numbers should you use?

$$\frac{\frac{7}{x} - 1}{x - 7}$$

A. $\{6.9000, 6.9900, 7.0100, 7.1000\}$

B. $\{7.0000, 6.9000, 6.9900, 6.9990\}$

C. $\{6.9000, 6.9900, 6.9990, 6.9999\}$

D. $\{7.0000, 7.1000, 7.0100, 7.0010\}$

E. $\{7.1000, 7.0100, 7.0010, 7.0001\}$

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10. Based on the information below, which of the following statements is always true?

$$As\ x\ approaches\ 4,\ f(x)\ approaches\ 1.61.$$

A. $f(1) = 4$

B. $f(4)$ is close to or exactly 1

C. $f(4) = 1$

D. $f(1)$ is close to or exactly 4

E. None of the above are always true.
